

Low-income, black neighborhoods still hit hard by air pollution

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Disease-causing air pollution remains high in pockets of America—particularly those where many low-income and African-American people live, a disparity highlighted in research presented at the annual meeting of the American Sociological Association in New York.

The nation's air on the whole has become cleaner in the past 70 years, but those benefits are seen primarily in whiter, higher-income areas, said Kerry Ard, an associate professor of environmental sociology at The Ohio State University, who will present her research today (Aug. 10, 2019.)

Ard used a variety of detailed data sources to examine air pollution and the demographics of the people who lived in 1-kilometer-square areas throughout a six-state region from 1995 through 1998. These are the four years after President Bill Clinton's 1994 executive order that focused attention on the environmental and health effects of federal actions on minority and low-income populations. The act's goal was "achieving [environmental protection](#) for all communities."

The six-state area analyzed in the Ohio State study, home to many aging and shuttered industrial plants, includes Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin. These states make up the U.S. Environmental Protection Agency region with the highest level of unequal distribution of air toxins between whites and African-Americans.

In the four years included in her analysis, Ard found persistent air pollution hot spots that did not improve.

"We're seeing that these pollution hot spots are the same, year after year, and every time they are in low-income communities—often communities of color. This has implications for a wide array of health disparities—from preterm births and infant mortality to developmental delays in childhood, to heart and [lung disease](#) later in life," Ard said.

"Our results do not support that there was a perceivable mitigation of this gap after the executive order. In fact, we found that for every 1 percent increase in low-income African Americans living in an area, the odds that an area would become a hot spot grew significantly. This was also true, but to a lesser extent, for increases in low-income white populations."

Previous research has shown that despite widespread reductions in air pollution, blacks are still experiencing twice the health risk from [air pollution](#) than whites.

This isn't particularly surprising given that many blacks moved north toward industry—and jobs—during the Great Migration of African Americans from southern rural states, Ard said. Though many of the older, more-harmful plants have closed, others remain open and are often grandfathered into older regulatory standards that aren't as strict as those imposed on newer companies, she said.

Ard said that efforts to control pollution aren't going far enough to begin to eliminate the air-quality disparities and the health inequities to which they contribute. Ard, who is part of Ohio State's Institute for Population Research, recently published a textbook chapter focusing on this work.

"We really need to look at older industrial plants and how they are being

regulated and how enforcement is happening in these areas," she said.

Air [pollution](#) is known to cause an array of health problems, but even those links aren't as well-understood as they should be because most efforts focus generically on fine particulate matter or on single toxins, rather than combinations that have the potential to inflict more harm, Ard said. Fine particulate matter refers to small, lightweight particles in the air that easily make their way into the lungs and sometimes the bloodstream and are known to trigger and worsen a host of diseases. But what, specifically, is in that matter is significant, and should be analyzed to steer policies aimed at protecting human health, Ard said.

In addition to tightening up air-quality standards for all polluters—and specifically going after the worst chemicals or combinations of chemicals—policymakers should consider efforts such as replanting trees in blighted areas in an effort to improve air quality, Ard said.

Provided by The Ohio State University

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